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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/623,322

07/19/2003

Marion Calmer

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06/15/2006

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EXAMINER

TORRES, ALICIA M

ART UNIT

PAPER NUMBER

3671

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/623,322	Applicant(s) CALMER, MARION	
	Examiner Alicia M. Torres	Art Unit 3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 20-29 is/are pending in the application.
- 4a) Of the above claim(s) 30-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-10 and 20-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. Newly submitted claims 30-40 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the claims are directed to the stalk roll or a pair of stalk rolls and not the entire separation element itself.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 30-40 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Specification

2. The abstract of the disclosure is objected to because it is not within the range of 50-150 words. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

DETAILED ACTION

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

4. Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Sutton.

Sutton discloses the device wherein the following method of engaging corn plants with a corn head row unit is inherent, the method comprising the steps of:

- a. engaging the corn plant with a plurality of rotation elements (40),
- b. pinching the corn plant between the rotational elements (40),
- c. penetrating the corn plant stalk with the rotational elements (40) a pre-determined penetration depth, wherein the pre-determined penetration depth of each of the rotational elements (40) is less than half the diameter of the corn plant stalk,
- d. pulling the corn plant stalk with the rotational elements (40),
- e. the penetrating, pinching and pulling steps repeatedly lacerating the corn plant stalk along its length and width; and,
- f. separating the corn plant ear from the corn plant stalk and husk.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 6, 7, 9, 21, 22, 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell in view of Lundahl et al., hereafter Lundahl.

7. In regards to claims 1, 21, 22 Russell discloses an improved separation element of a corn head row unit comprising:

- a. a source of power (22) for rotation,
- b. at least two opposing stalk rolls (10, 12) connected to the power source (22),
- c. the stalk rolls (10, 12) having at least one flute (76),
- d. the flute (76) having at least one penetration point or knife edge (78) having a predetermined surface slope.

However, Russell fails to disclose wherein the penetration point is composed of hardened material.

Lundahl discloses a cutting edge for cutting crop wherein the penetration point is composed of hardened material.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use hardened material as taught by Lundahl on the flute of Russell in order to improve wear and self-sharpening characteristics.

8. In regards to claims 2, 3, 6, 7, 9, 25-29 Russell discloses an improved separation element of a corn head row unit comprising:

- a. a source of power (22) for rotation,

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b. at least two opposing stalk rolls (10, 12) connected to the power source (22),
c. the stalk rolls (10, 12) having at least one flute (76),
d. the flute (76) having a knife edge (78), as per claim 2; and
wherein the knife edge (78) has a predetermined surface slope, as per claim 3; and
wherein the opposing flutes (76) are tapered, as per claims 6, 25 and 29; and
wherein the opposing flutes (76) intermesh, as per claims 7 and 26; and
wherein the opposing flutes (76, 80) surfaces have a plurality of radii along the length of
the stalk roll, as per claims 9, 27 and 28.

However, Russell fails to disclose wherein the entire knife edge is composed of hardened material, as per claim 2.

Lundahl discloses a cutting edge for cutting crop wherein the penetration point is composed of hardened material.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use hardened material as taught by Lundahl on the flute of Russell in order to improve wear and self-sharpening characteristics.

9. Claims 4, 5, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell and Lundahl as applied to claims 3 and 22 above, and further in view of Calmer.

The device is disclosed as applied to claim 3 above. However, the combination fails to disclose wherein the knife edges have a forward slope relative to the direction of rotation of each of the stalk rolls, as per claim 4; and

Wherein the knife edges of opposing flutes have a predetermined surface slope and the angle of the slopes of opposing flutes are identical, as per claim 5.

Calmer discloses a similar stalk roll wherein the knife edges (14a) have a forward slope relative to the direction of rotation of each of the stalk rolls (14), as per claim 13; and

Wherein the knife edges (14a) have a predetermined surface slope and the angle of the slopes of opposing flutes are identical, as per claim 14.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the knife edges of Calmer on the device of Russell and Lundahl as is known in the prior art.

10. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell and Lundahl as applied to claim 2 above, and further in view of Sutton.

The device is disclosed as applied to claim 2 above. However, the combination fails to disclose wherein the radius of the opposing flute surfaces is reduced in discrete increments along the length of the stalk roll, as per claim 8; and

Wherein the radius of the leading edge of the flute is less than the trailing edge of the flute in relation to the direction of rotation of the stalk roll, as per claim 10.

Sutton discloses a similar stalk roll wherein the radius of the opposing flute surfaces (45) is reduced in discrete increments along the length of the stalk roll (40), as per claim 8; and

Wherein the radius of the leading edge of the flute (45) is less than the trailing edge of the flute (45) in relation to the direction of rotation of the stalk roll (40), as per claim 10.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the change in flute radius of Sutton on the stalk roll of Russell and Lundahl in order to minimize damage to and bruising of the ear.

Response to Arguments

11. In response to applicant's argument that Lundahl et al. is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the Lundahl reference is both in the field of applicant's endeavor, that of cutting and harvesting crops, and reasonably pertinent to the particular problem. Whether or not the tooth of Lundahl entirely penetrates a stalk is irrelevant, the tooth is meant to engage and lacerate a stalk, just like the separation element of the invention.

In response to the applicant's arguments regarding Russell, the applicant is arguing more than claimed. There is no structure in the claims that would preclude the offset and intermeshing structure of Russell's stalk rolls.

Applicant's arguments have been fully considered but they are not persuasive.

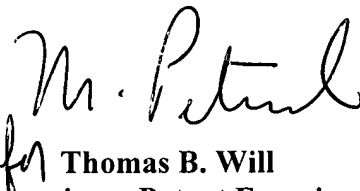
Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Torres whose telephone number is 571-272-6997. The examiner can normally be reached Monday through Thursday from 7:00 a.m. – 4:30 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will, can be reached at 571-272-6998.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is 703-305-1113. The fax number for this Group is 571-273-8300.


for **Thomas B. Will**
Supervisory Patent Examiner
Group Art Unit 3671

AMT
June 11, 2006